

Project title
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1. Project Title

Learn Stream – An Online Platform for MCQ Practice and Testing

2. Project Overview

Learn Stream is a web-based educational platform designed to provide students with personalised learning opportunities through multiple-choice question (MCQ) practice and dynamic testing. The platform supports subject-wise, chapter-wise practice and allows users to customise their tests. Teachers can contribute to the question bank, and administrators manage user registrations and content reviews.

3. System features

3.1. MCQ Practice

- Subject-wise and Chapter-wise Practice:

Learn Stream empowers students to take control of their learning by allowing them to choose specific subjects or chapters for practice. This feature is designed to align with the curriculum, making it easier for students to focus on the areas where they need improvement. By offering targeted practice, students can build a solid foundation in each subject, gradually increasing their confidence and competence.

- Difficulty Levels:

To cater to a diverse range of learning paces and styles, questions within the platform are categorized by difficulty levels: easy, medium, and high. This flexibility enables users to tailor their practice sessions according to their current understanding and goals. Students can opt for a single difficulty level to concentrate on mastering specific concepts or select a mixed set to challenge themselves. This adaptive learning approach encourages continuous improvement and keeps students engaged.

3.2. Dynamic MCQ Test

- Single or Multiple Subjects

Users have the option to create exams that cover either a single subject or multiple subjects simultaneously. This feature is particularly beneficial for comprehensive assessments, allowing students to gauge their understanding across different areas of study in one sitting. It mimics real-world testing scenarios where interdisciplinary knowledge is often required.

- Customizable Parameters

Students can personalise their exam experience by configuring various parameters such as the number of questions for each subject and the total duration of the test. This customization ensures that each test can fit individual learning needs and time constraints, promoting a more effective and less stressful assessment environment.

- Exam Overview

After completing a test, users will receive a detailed performance overview, including scores and time analysis for each question. After completing a test, users receive a detailed performance overview that includes not only their overall score but also an analysis of their responses. This analysis highlights which questions were answered correctly and incorrectly, along with the time taken for each question. Such feedback is invaluable for self-reflection and targeted revision, helping students to identify specific areas where they may need further study or practice.

3.3. Question Submission by Teachers:

- Teacher Access:

Learn Stream values the contributions of educators by allowing registered teachers to submit MCQs in their areas of expertise. This feature not only enriches the platform's content but also fosters a collaborative learning environment where teachers can share their insights and knowledge with students. Submissions are subject to review by administrators to ensure that the questions meet quality standards and are aligned with educational goals.

3.4. Admin Features

- Review User Registration

Administrators play a crucial role in maintaining the platform's integrity. They have the authority to approve or reject user registrations, which helps control access to the platform. By carefully reviewing registrations, administrators can ensure that the platform is used effectively and safely, fostering a positive learning environment.

- Review Pending Questions

Admins are responsible for reviewing all questions submitted by teachers. This review process is essential for maintaining high standards of quality and relevance. By ensuring that only well-crafted, accurate questions are available to students, administrators help to enhance the educational value of the platform.

3.5. Contact Us Page

A page where users can submit queries or feedback, which will be addressed by the website managers (administrators). The Contact Us page provides a vital communication channel for users to submit queries, feedback, or issues they may encounter while using the platform. This feature is designed to create a supportive environment where students and teachers can easily reach out for assistance. Queries submitted through this page are managed by website administrators, ensuring that concerns are addressed promptly and effectively.

3.6. User Authentication

- Login and Signup

Secure user authentication is implemented to protect the platform and its users. This system allows students, teachers, and administrators to access their respective functionalities while ensuring that personal data remains safe. By requiring users to log in or sign up, the platform can provide a personalised experience, tailored to the specific needs and roles of each user. This level of security helps to build trust in the platform, encouraging more users to engage actively with its resources.

4. Target Audience

4.1. Students

Learners at various academic levels who want to improve their subject knowledge through practice and testing.

4.2. Teachers

Educators who wish to contribute questions to the platform and help students.

5. Goals

5.1. Subject-wise MCQ Practice

Learn Stream aims to deliver a focused platform for students to engage in MCQ practice tailored to their specific subjects and chapters. By categorising questions by difficulty (easy, medium, high), students can choose the level that aligns with their current understanding. This targeted approach fosters confidence and mastery of topics, enabling learners to build their knowledge at their own pace.

5.2. Dynamic Testing Capabilities

The platform seeks to transform the traditional testing experience by allowing users to create customised exams. Students can select single or multiple subjects, adjust the number of questions, and set the total duration of tests. This flexibility empowers students to tailor assessments to their learning needs, reducing anxiety and encouraging a more positive attitude toward testing.

5.3. Teacher Question Submission

Learn Stream encourages active participation from educators by allowing them to submit their own MCQs. This not only enriches the question bank but also fosters a sense of ownership among teachers, who can ensure the content aligns with curriculum standards. This collaborative effort enhances the quality of education provided on the platform.

5.4. Efficient Query Management

The Contact Us page serves as a vital communication tool, allowing users to submit queries or feedback easily. By addressing these inquiries promptly, Learn Stream creates a supportive environment that values user input and continuously improves based on feedback. This responsiveness enhances user satisfaction and engagement.

5.5. Secure User Authentication

Implementing secure authentication is critical for Learn Stream, ensuring that students, teachers, and administrators have access only to features relevant to their roles. This not only protects sensitive information but also builds trust within the community. A secure and personalised experience encourages users to engage more deeply with the platform.

6. Technologies Used

6.1. Frontend (HTML, CSS, JavaScript, Bootstrap)

6.1.1. HTML

Provides the essential structure for the website, organising content and elements like text, images, and links.

6.1.2. CSS

Enhances visual presentation by customising layouts, colors, and fonts, ensuring a visually appealing user experience.

6.1.3. JavaScript

Adds interactivity and dynamic features, enabling functionalities like real-time updates and form validation for increased user engagement.

6.1.4. Bootstrap

A CSS framework that ensures consistent design across devices. Its responsive components facilitate faster development and adherence to modern design practices.

6.2. Backend (PHP)

PHP is used for handling server-side logic and interactions between the frontend and the database. It is ideal for building dynamic web applications, ensuring data processing and communication are secure and efficient.

6.3. Framework (Laravel)

Laravel simplifies the development process with its built-in tools for authentication, routing, and database management. It provides a secure and scalable backend structure, ensuring that future feature expansions and user growth are supported.

6.4. Database (MySQL)

MySQL is used to store all platform data, including user profiles, questions, tests, and results. It is reliable and scalable, ensuring the system can handle increasing data as the platform grows.

7. Proposed system design

7.1. Front end design

7.1.1. Page Title: Home page

It is our home page where a user will land on this page when he comes to the website.

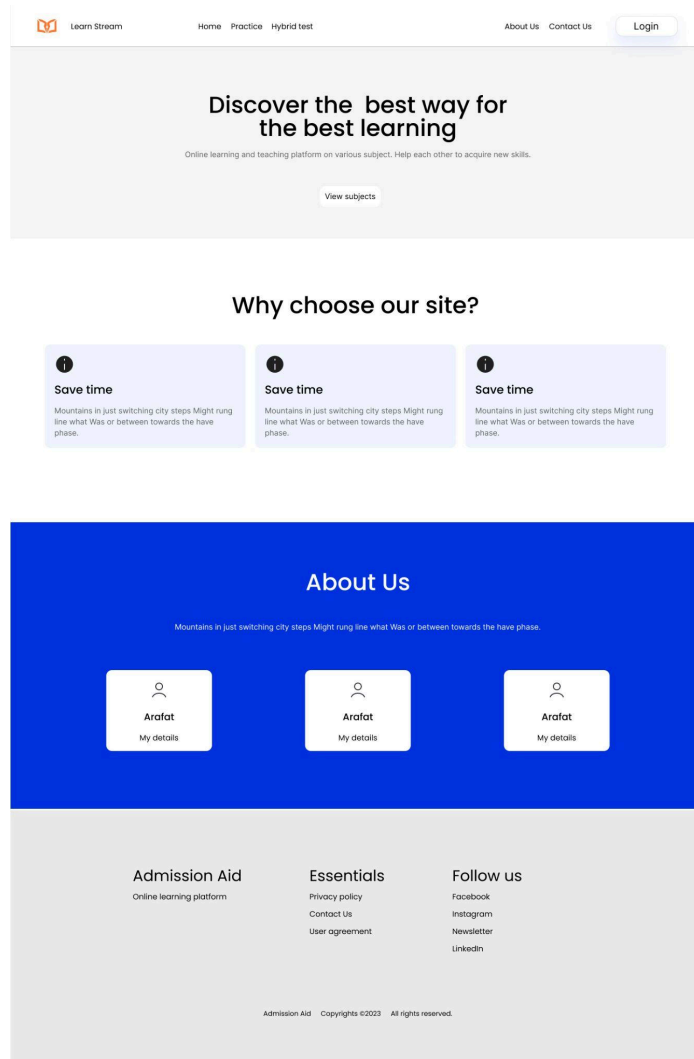



Figure of Homepage

7.1.2. Page Title: Registration and login page

This is our registration page. Here a user can register in 2 ways like Student and teacher. If a student wants to take the test, he has to register on the website first

 Learn Stream

[Home](#) [Practice](#) [Hybrid Test](#)

[About Us](#) [Contact Us](#)

Login

Signup

▼

Signup

Login

[Forgot password?](#)

Login

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Figure of registration and login page


7.1.3. Page Title: Practice page


This is our practice page where if any user wants to practise then first select 'subject' from here and go to the next step.

 Learn Stream

Home Practice Hybrid test

About Us Contact Us








Featured Subjects

Choose subject to practice


Search





Physics

 10 Chapters  109 MCQs


Click to view





Physics

 10 Chapters  109 MCQs


Click to view





Physics

 10 Chapters  109 MCQs


Click to view





Physics

 10 Chapters  109 MCQs


Click to view





Physics

 10 Chapters  109 MCQs


Click to view





Physics

 10 Chapters  109 MCQs


Click to view





Physics

 10 Chapters  109 MCQs

Click to view



Physics

 10 Chapters  109 MCQs

Click to view

<

1

2

3

>

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7.1.4. Page Title: Subject dashboard page

This is our subject dashboard page where a user can select the exam test on which chapter and also select the exam test level like easy, medium, hard.

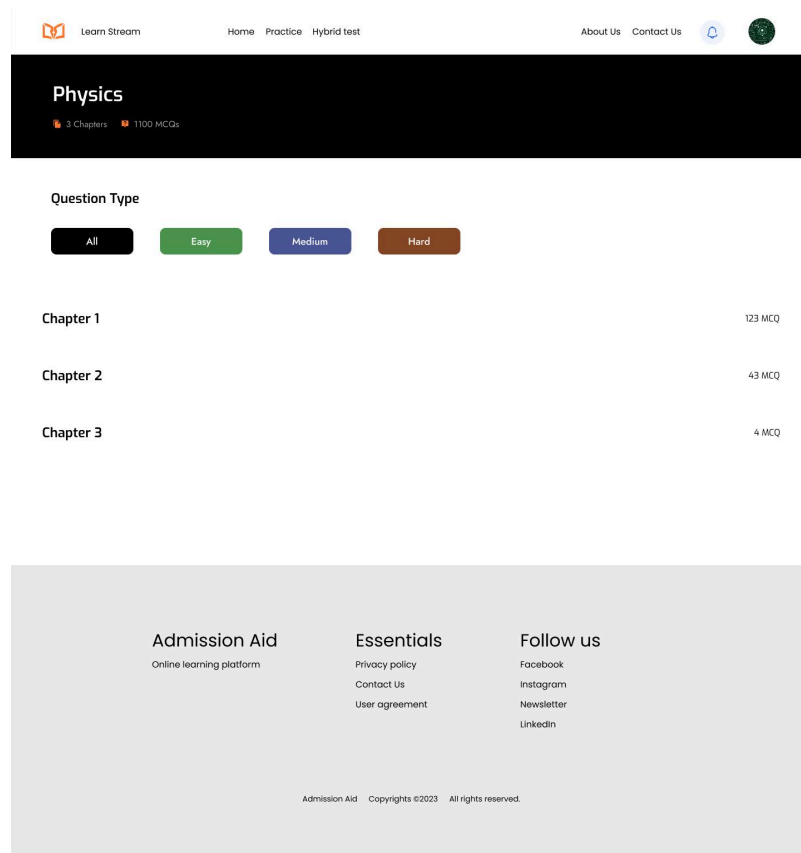


Figure of subject dashboard page

7.1.5. Page Title: Mcq page

This is our mcq interface page where mcq will come in single form and questions will have submit, and previous buttons. There will also be skip and question hint options.

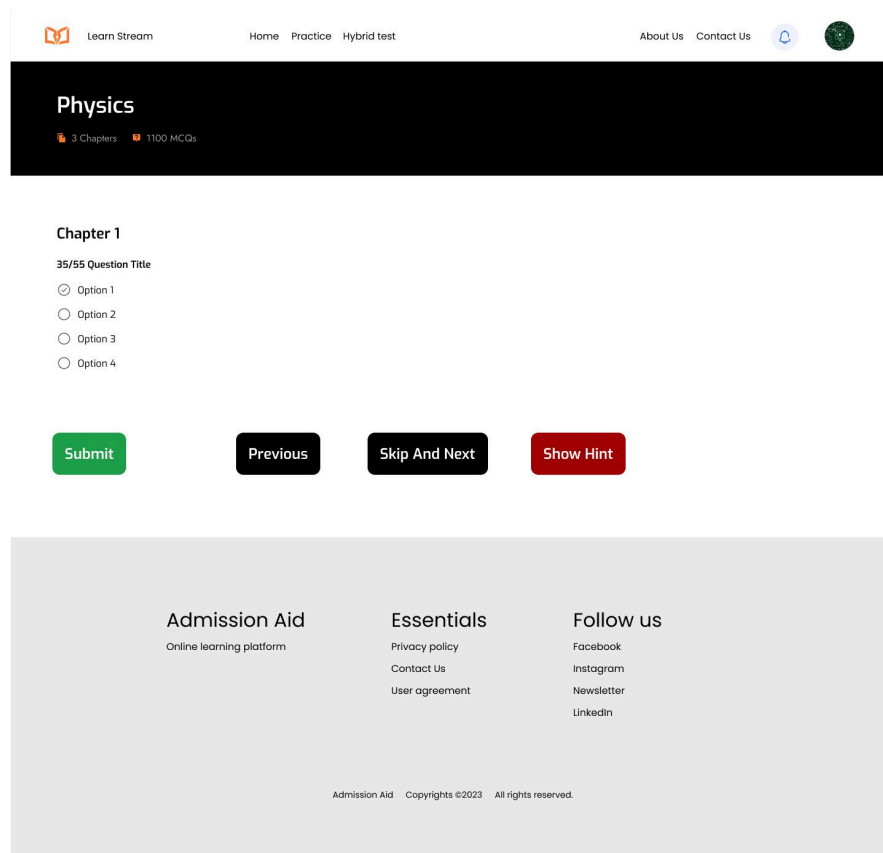


Figure of mcq practice page

7.1.6. Page Title: Mcq page after submission

This is our mcq interface after mcq submission where if the mcq is correct the correct message shows down, else if the submission is not correct, the wrong message will show.

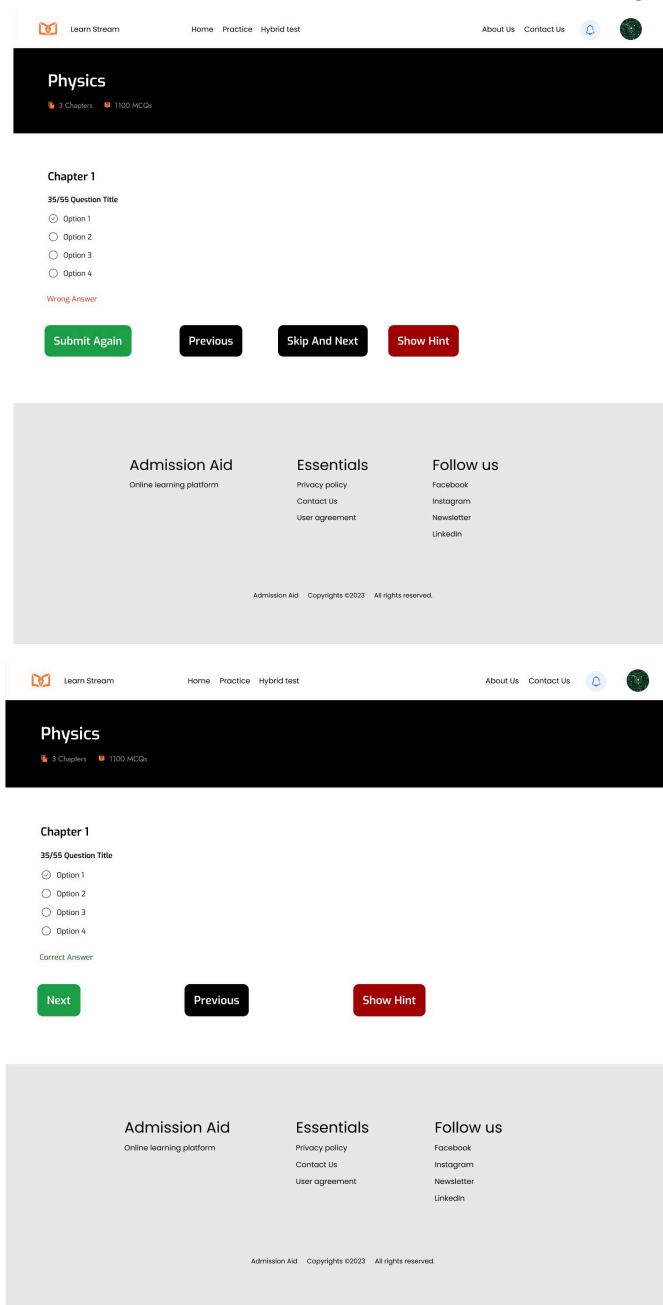



Figure of mcq test page after submission


7.1.7. Page Title: Hybrid exam page


This is our Hybrid Exam Page where a user can choose the subject of their choice and take the exam test.

 Learn Stream

Home Practice Hybrid test

About Us Contact Us





Hybrid test

Choose single subject or multiple subject

☒ Bangla

☐ English

☐ ICT

☐ Physics

☒ Bangla

☐ English

☐ ICT

☐ Physics

☒ Bangla

☐ English

☐ ICT

☐ Physics

Per subject question

Test duration

Start Test

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Figure of hybrid test page

7.1.8. Page Title: Hybrid exam test page

This is our hybrid exam test page where a single page will have multiple mcq.

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HomePrivacyHybrid test

About UsContact Us

Hybrid Test #1343

Subject detailsDuration

Q 1/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Q 2/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Q 3/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Q 4/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Q 5/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Q 6/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Q 7/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Q 8/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Q 9/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Q 10/10 Question Title

☐ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Submit Answer

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Figure of hybrid test page 2

7.1.9. Page Title: Hybrid exam test result page

This is our hybrid test result page and after submitting the test test the result will show how many got right or wrong.

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HomePracticeHybrid test

About UsContact Us

Hybrid Test #1343

Total Question: 40

Correct: 20

Wrong: 10

Not Answered: 10

Q 1/10 Question Title

☒ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Correct Answer D

Q 1/10 Question Title

☒ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Correct Answer D

Q 1/10 Question Title

☒ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Correct Answer D

Q 1/10 Question Title

☒ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Correct Answer D

Q 1/10 Question Title

☒ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Correct Answer D

Q 1/10 Question Title

☒ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Correct Answer D

Q 1/10 Question Title

☒ Option 1

☐ Option 2

☐ Option 3

☐ Option 4

Correct Answer D

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7.1.10. Page Title: Profile page


This is our profile page after registration on our website. All the information will show here and also if he wants to change the information he can do it.

 Learn Stream

HomePracticeHybrid test

About UsContact Us





Change

This will be your public picture

Change password

Email

email@email.com

Fullname

Abdul Khaled Arafat

Contact

01512312312

Gender

Male

Save Changes

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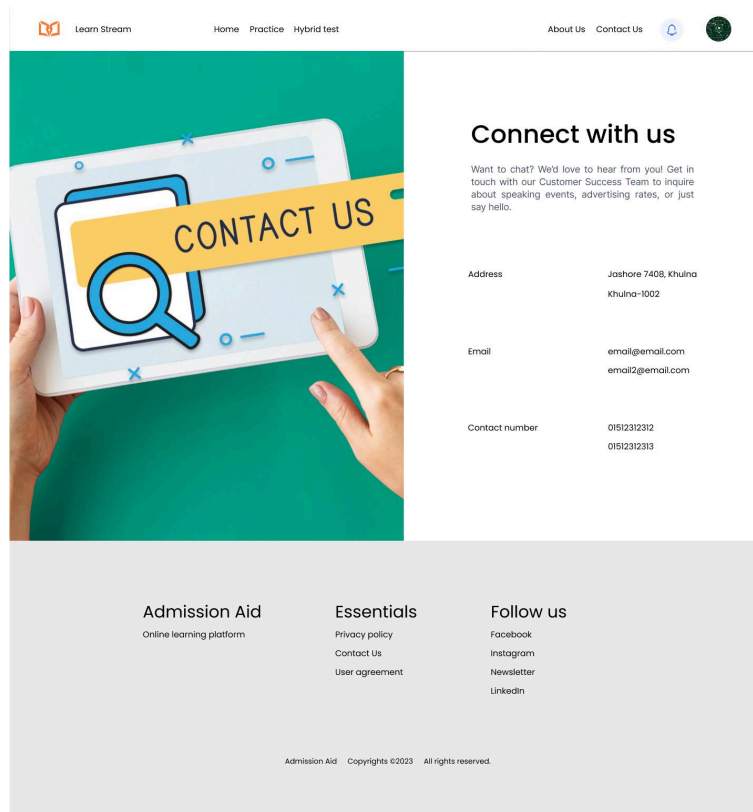
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7.1.11. Page Title: Contact page

This is our contact page where any user facing any problem can contact with the info here.



7.2. Backend design (Database management system)

7.2.1. Schema diagram

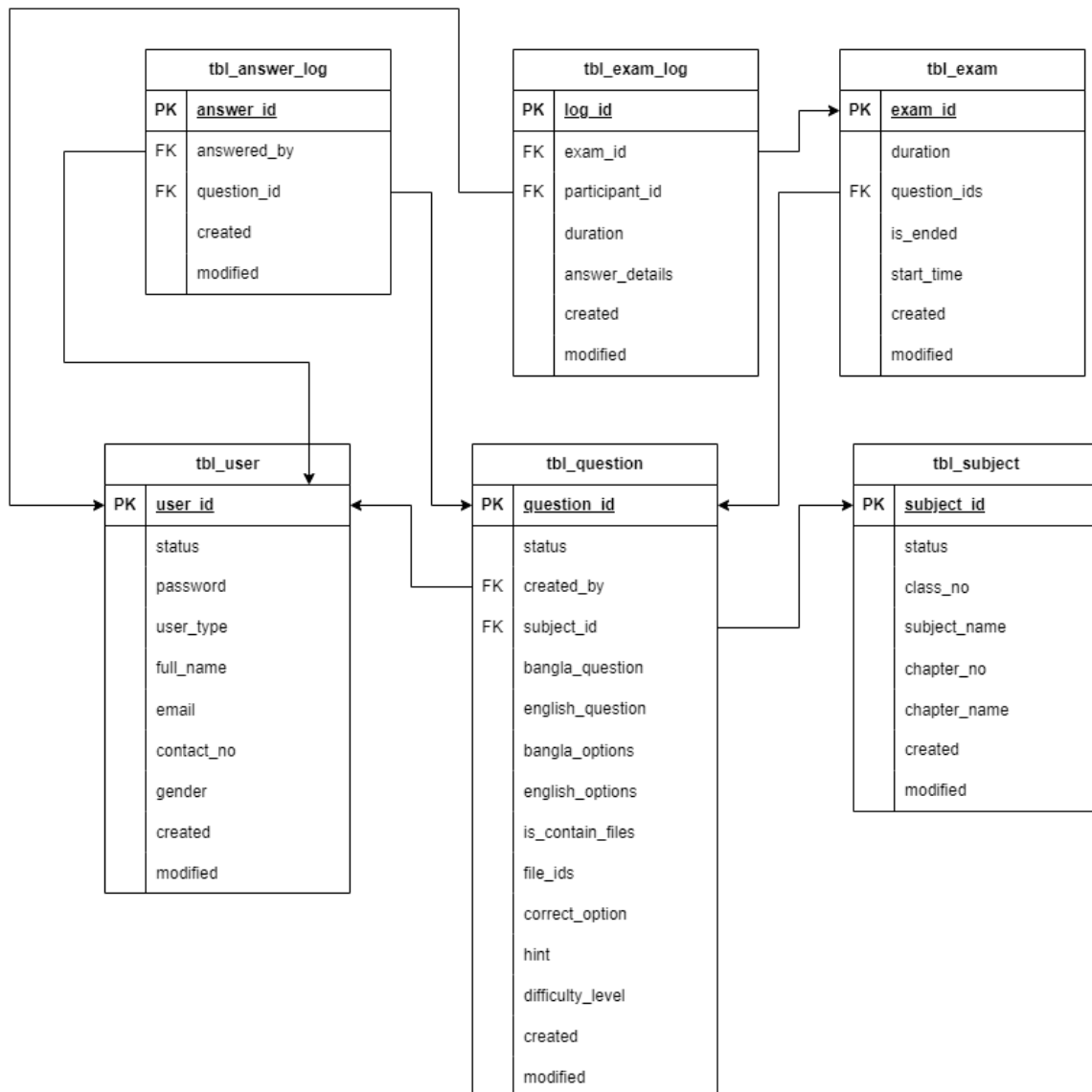


Figure:
Schema diagram

7.3. Entity relationship diagram

8.

9. Conclusion

The Learn Stream project aims to provide effective and accessible learning tools by integrating modern technologies and thoughtful design. It offers subject-wise and difficulty-based MCQ practice, allowing students to engage with material tailored to their learning styles, enhancing understanding and self-directed learning. The platform features customizable testing capabilities that promote a more engaging assessment experience, boosting students' confidence.

By enabling teachers to submit questions, Learn Stream enhances content quality and fosters a collaborative community of educators. A dedicated Contact Us page facilitates efficient management of user feedback and queries, ensuring satisfaction and valuing user input. Additionally, secure authentication and role-based access protect user data, building trust.

With technologies like Laravel and MySQL, Learn Stream is designed for scalability, ensuring it can grow alongside its user base and develop new features seamlessly. Overall, the platform prioritizes personalized experiences, collaborative growth, and robust security, making quality learning accessible and enjoyable for everyone.